### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-023993

Address: 333 Burma Road **Date Inspected:** 15-May-2011

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes An Qing Xiang No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

**Bridge No:** 34-0006 **Component: OBG** Components

## **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector, Anand Upadhye was present during the times noted above for observations relative to the work being performed.

## **NDT**

Outside Yard – OBG Trial Assembly

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted notification number 09137.

Magnetic Particle Testing (MT).

This QA inspector performed MT of approximately 15 % of the area previously tested and accepted by ZPMC Quality control personnel. This QA inspector generated MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows:

SEG3009E-016.

FB3142-001-088, 089, 091, 092, 096, 097, 101, 102, 106, 107, 111, 112, 116, 117, 121, 126, 127.

 $SEG3009L-079, 080, 083, 084, 087, 088, 091, 095, 096, 099, 100, 103, 104, 107, 108, 111 \sim 132, 132 \sim 138.$ 

#### WELDING

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This QA Inspector observed the following work in progress:

Outside Yard – OBG Trial Assembly

This QA Inspector observed ZPMC qualified welding personnel identified as 045246 perform repair welding by Shielded Metal Arc Welding (SMAW), on Top Anchor plate to Vertical Anchor plate weld of OBG Segment 14W. Weld joint is identified as SEG3020U-591. ZPMC Quality Control (QC) Inspector identified as Zhu Lin was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-345-SMAW-4G (4F)-FCM-Repair-1, which is used as per Critical welding repair report B-CWR2943.

This QA Inspector observed ZPMC qualified welding personnel identified as 045196 perform repair welding by Shielded Metal Arc Welding (SMAW), on Anchor plate to longitudinal diaphragm weld between panel points PP126.5 and PP127 of OBG Segment 14W. Weld joint is identified as SEG3020X-007. ZPMC Quality Control (QC) Inspector identified as Zhu Lin was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-345-SMAW-4G (4F)-FCM-Repair-1, which is used as per Welding repair report B-WR20845.

This QA Inspector observed ZPMC qualified welding personnel identified as 066361 perform repair welding by Shielded Metal Arc Welding (SMAW), on Side plate to Side plate weld of OBG Segment 14W. Weld joint is identified as SEG3020AW-089. ZPMC Quality Control (QC) Inspector identified as Zhu Lin was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-345-SMAW-2G (2F)-FCM-Repair-1, which is used as per Welding repair report B-WR20971.

This QA Inspector observed ZPMC qualified welding personnel identified as 066825 perform welding by Shielded Metal Arc Welding (SMAW), on Floor beam I Rib to longitudinal diaphragm weld at panel point PP126 of OBG Segment 14W. Weld joint is identified as SEG3020X-076. ZPMC Quality Control (QC) Inspector identified as An Qing Xiang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-P-2212-Tc-U4b-FCM-1.

This QA Inspector observed ZPMC qualified welding personnel identified as 066751 perform welding by Flux Cored Arc Welding (FCAW), on Edge plate I Rib to Floor beam weld at panel point PP126 of OBG Segment 14W. Weld joint is identified as SEG3020AG-022, 024. ZPMC Quality Control (QC) Inspector identified as An Qing Xiang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2231-ESAB.

This QA Inspector observed ZPMC qualified welding personnel identified as 045175 perform welding by Flux Cored Arc Welding (FCAW), on Anchor plate I Rib to Floor beam weld at panel point PP126.5 of OBG Segment 14W. Weld joint is identified as SEG3020P-139, 141. ZPMC Quality Control (QC) Inspector identified as An Qing Xiang was present to monitor the welding process. The welding variables recorded by ZPMC QC appeared to be in general compliance with WPS-B-T-2233-ESAB.

This QA Inspector observed ZPMC qualified NDT personnel perform Ultrasonic Testing on Vertical plate stiffeners to Floor beam diaphragm plate weld at panel point PP123 of OBG Segment 13CW. Weld joint is

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identified as SEG3015H-234, 235, 238, 239, 242, 243, 246 and 247. See attached picture.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



# **Summary of Conversations:**

No significant conversations were reported on this date.

## **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, phone: 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Upadhye,Anand	Quality Assurance Inspector
Reviewed By:	Clifford, William	QA Reviewer